

[4910-13-U]

DEPARTMENT OF TRANSPORTATION

Federal Aviation Administration

14 CFR Part 39 [65 FR 45703 7/25/2000]

[Docket No. 2000-SW-10-AD; Amendment 39-11827; AD 2000-14-16]

RIN 2120-AA64

Airworthiness Directives; Bell Helicopter Textron Canada Model 407 Helicopters

AGENCY: Federal Aviation Administration, DOT.

ACTION: Final rule.

SUMMARY: This amendment supersedes an existing airworthiness directive (AD) for Bell Helicopter Textron Canada (BHTC) Model 407 helicopters. That AD requires installing a tail rotor pitch-limiting left-pedal stop (pedal stop), installing an airspeed limitation placard, marking a never-exceed velocity (Vne) placard on all airspeed indicators, and revising the Limitations section of the Rotorcraft Flight Manual (RFM). This AD requires installing a redesigned tail rotor system and modifying the vertical fin and horizontal stabilizer to allow restoring the Vne to 140 knots indicated airspeed (IAS). This AD is prompted by design changes to the tail rotor system and modification of the pedal stop for airspeed actuation to eliminate a tail rotor strike to the tailboom. The actions specified by this AD are intended to prevent the tail rotor blades from striking the tailboom, separation of the aft section of the tailboom with the tail rotor gearbox and vertical fin, and subsequent loss of control of the helicopter.

DATES: Effective August 29, 2000.

The incorporation by reference of certain publications listed in the regulations is approved by the Director of the Federal Register as of August 29, 2000.

ADDRESSES: The service information referenced in this AD may be obtained from Bell Helicopter Textron Canada, 12,800 Rue de l'Avenir, Mirabel, Quebec JON1LO, telephone (800) 463-3036, fax (514) 433-0272. This information may be examined at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

FOR FURTHER INFORMATION CONTACT: Sharon Miles, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Regulations Group, Fort Worth, Texas 76193-0111, telephone (817) 222-5122, fax (817) 222-5961.

SUPPLEMENTARY INFORMATION: A proposal to amend part 39 of the Federal Aviation Regulations (14 CFR part 39) by superseding AD 99-06-15, Amendment 39-11111 (64 FR 16801, April 7, 1999), which applies to BHTC Model 407 helicopters, was published in the **Federal Register** on May 17, 2000 (65 FR 31291). That action proposed to require installing a redesigned tail rotor system, modifying the vertical fin and horizontal stabilizer, and restoring the Vne to 140 knots IAS.

Interested persons have been afforded an opportunity to participate in the making of this amendment. No comments were received on the proposal or the FAA's determination of the cost to the public. The FAA has determined that air safety and the public interest require the adoption of the rule as proposed except for removing unnecessary wording from the introductory unsafe condition paragraph and removing the superseded AD number from Figure 1.

The FAA estimates that 200 helicopters of U.S. registry will be affected by this AD. It will take approximately 80 work hours per helicopter to perform the modifications and installations and the average labor rate is \$60 per work hour. Required parts will cost approximately \$24,161 per helicopter; however, the manufacturer has stated they will provide these parts at no cost. Additionally, the manufacturer has stated they will reimburse the cost of labor up to \$4,400. Based on these figures, the total cost impact of the AD on U.S. operators is estimated to be \$5,792,200 or \$28,961 per helicopter, assuming no costs are reimbursed.

The regulations adopted herein will not have a substantial direct effect on the States, on the relationship between the national Government and the States, or on the distribution of power and responsibilities among the various levels of government. Therefore, it is determined that this final rule does not have federalism implications under Executive Order 13132.

For the reasons discussed above, I certify that this action (1) is not a "significant regulatory action" under Executive Order 12866; (2) is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979); and (3) will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act. A final evaluation has been prepared for this action and it is contained in the Rules Docket. A copy of it may be obtained from the Rules Docket at the location provided under the caption "ADDRESSES."

List of Subjects in 14 CFR Part 39

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

Adoption of the Amendment

Accordingly, pursuant to the authority delegated to me by the Administrator, the Federal Aviation Administration amends part 39 of the Federal Aviation Regulations (14 CFR part 39) as follows:

PART 39 - AIRWORTHINESS DIRECTIVES

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

§ 39.13 [Amended]

2. Section 39.13 is amended by removing Amendment 39-11111 (64 FR 16801), and by adding a new airworthiness directive (AD), Amendment 39-11827, to read as follows:

AIRWORTHINESS DIRECTIVE

REGULATORY SUPPORT DIVISION
P.O. BOX 26460
OKLAHOMA CITY, OKLAHOMA 73125-0460



U.S. Department
of Transportation
**Federal Aviation
Administration**

AD's are posted on the internet at <http://av-info.faa.gov>

The following Airworthiness Directive issued by the Federal Aviation Administration in accordance with the provisions of Title 14 of the Code of Federal Regulations (14 CFR) part 39, applies to an aircraft model of which our records indicate you may be the registered owner. Airworthiness Directives affect aviation safety and are regulations which require immediate attention. You are cautioned that no person may operate an aircraft to which an Airworthiness Directive applies, except in accordance with the requirements of the Airworthiness Directive (reference 14 CFR part 39, subpart 39.3).

2000-14-16 BELL HELICOPTER TEXTRON CANADA: Amendment 39-11827. Docket No. 2000-SW-10-AD. Supersedes AD 99-06-15, Amendment 39-11111, Docket No. 99-SW-16-AD.

Applicability: Model 407 helicopters, certificated in any category.

NOTE 1: This AD applies to each helicopter identified in the preceding applicability provision, regardless of whether it has been otherwise modified, altered, or repaired in the area subject to the requirements of this AD. For helicopters that have been modified, altered, or repaired so that the performance of the requirements of this AD is affected, the owner/operator must request approval for an alternative method of compliance in accordance with paragraph (d) of this AD. The request should include an assessment of the effect of the modification, alteration, or repair on the unsafe condition addressed by this AD; and, if the unsafe condition has not been eliminated, the request should include specific proposed actions to address it.

Compliance: Required as indicated, unless accomplished previously.

To prevent the tail rotor blades from striking the tailboom, separation of the aft section of the tailboom with the tail rotor gearbox and vertical fin, and subsequent loss of control of the helicopter, accomplish the following:

(a) Before further flight:

(1) Install a stop that limits the maximum distance that the left pedal can travel in accordance with Part I of the Accomplishment Instructions in Bell Helicopter Textron Canada Technical Bulletin 407-98-13, dated December 12, 1998 (TB).

(2) Adjust the rigging of the directional controls in accordance with Part II of the Accomplishment Instructions in the TB.

(3) Install the airspeed limitation placard shown in Figure 1 of this AD so that it completely covers and obscures the airspeed limitation placard, P/N 407-070-201-103. Ensure that the replacement placard is at least 2 1/16-inches tall and 3 9/16-inches long.

407 AIRSPEED LIMITATIONS -KNOTS- IAS											
OAT	PRESSURE ALTITUDE FT X 1000										
C°	0	2	4	6	8	10	12	14	16	18	20
52	98	93	88	-	-	-	-	-	-	-	-
40	100	95	91	86	81	76	-	-	-	-	-
20	100	100	95	90	85	80	76	71	66	61	-
0	100	100	100	95	90	85	80	75	70	65	60
-20	100	100	100	100	95	90	85	80	75	70	65
-40	97	93	88	83	79	74	70	65	61	-	-
MAXIMUM AUTOROTATION VNE 100 KIAS											

FIGURE 1

(4) Install a redline at a Vne of 100 KIAS on all airspeed indicators. Remove or obscure any previously installed lines or arcs above 100 KIAS. If the redline is installed on the instrument glass, also install a slippage mark on the glass and on the instrument case.

(5) Add the following statement to the Limitations section of the Rotorcraft Flight Manual (RFM):
When operating at an airspeed of 60 to 100 KIAS, maintain yaw trim within one ball diameter of the centered position of the turn and bank (slip) indicator, and avoid sudden or large directional control inputs in flight.

(6) Mark the airspeed limitations placard in Figure 1-3 in the RFM to indicate that it has been superseded by this AD, and insert a copy of this AD into the RFM. Also, mark the airspeed indicator in Figure 1-5 of the RFM to indicate a Vne of 100 KIAS.

(7) This AD revises the limitations section of BHTC Model 407 RFM by replacing sheet 1 of Figure 1-3 in the RFM with Figure 1 of this AD, revising sheet 3 of Figure 1-5 of the RFM, and adding an operational limitation for allowable yaw trim and directional control input.

(8) Report any uncommanded right yaw, uncommanded movement of the pedals during flight, or tail rotor blade contact with the tailboom within 24 hours of the occurrence to the Manager, Regulations Group, telephone (817) 222-5111. Reporting requirements have been approved by the Office of Management and Budget and assigned OMB control number 2120-0056.

(b) Before further flight after January 31, 2001:

(1) Remove and replace the existing tail rotor with tail rotor installation, P/N 407-012-100-109, in accordance with Part II of Bell Helicopter Textron Technical Bulletin 407-99-17, dated April 15, 1999.

(2) Modify the vertical fin and horizontal stabilizer in accordance with Bell Helicopter Textron Technical Bulletin No. 407-96-2, Revision A, dated March 11, 1997.

(3) Install the tail rotor airspeed-actuated pedal stop kit, install the new airspeed limitation decals, and remove the temporary instrument markings and RFM changes in accordance with the Accomplishment Instructions in Parts I, II, and III of Bell Helicopter Textron Alert Service Bulletin 407-99-33, Revision A, dated March 10, 2000.

(c) Accomplishing the requirements of paragraph (b) of this AD is terminating action for the requirements of this AD.

(d) An alternative method of compliance or adjustment of the compliance time that provides an acceptable level of safety may be used if approved by the Manager, Regulations Group, Rotorcraft Directorate, FAA. Operators shall submit their requests through an FAA Principal Maintenance Inspector, who may concur or comment and then send it to the Manager, Regulations Group.

NOTE 2: Information concerning the existence of approved alternative methods of compliance with this AD, if any, may be obtained from the Regulations Group.

(e) Special flight permits may be issued in accordance with sections 21.197 and 21.199 of the Federal Aviation Regulations (14 CFR 21.197 and 21.199) to operate the helicopter to a location where the requirements of this AD can be accomplished.

(f) The modifications shall be done in accordance with Parts I and II of the Accomplishment Instructions in Bell Helicopter Textron Canada Technical Bulletin 407-98-13, dated December 12, 1998; Part II of Bell Helicopter Textron Technical Bulletin 407-99-17, dated April 15, 1999; Bell Helicopter Textron Technical Bulletin No. 407-96-2, Revision A, dated March 11, 1997; and Parts I, II, and III of Bell Helicopter Textron Alert Service Bulletin 407-99-33, Revision A, dated March 10, 2000. This incorporation by reference was approved by the Director of the Federal Register in accordance with 5 U.S.C. 552(a) and 1 CFR part 51. Copies may be obtained from Bell Helicopter Textron Canada, 12,800 Rue de l'Avenir, Mirabel, Quebec JON1LO, telephone (800) 463-3036, fax (514) 433-0272. Copies may be inspected at the FAA, Office of the Regional Counsel, Southwest Region, 2601 Meacham Blvd., Room 663, Fort Worth, Texas; or at the Office of the Federal Register, 800 North Capitol Street, NW., suite 700, Washington, DC.

(g) This amendment becomes effective August 29, 2000.

NOTE 3: The subject of this AD is addressed in Transport Canada (Canada) AD CF-98-36R7, dated February 1, 2000.

FOR FURTHER INFORMATION CONTACT:

Sharon Miles, Aviation Safety Engineer, FAA, Rotorcraft Directorate, Regulations Group, Fort Worth, Texas 76193-0111, telephone (817) 222-5122, fax (817) 222-5961.

Issued in Fort Worth, Texas, on July 13, 2000.

Henry A. Armstrong, Manager, Rotorcraft Directorate, Aircraft Certification Service.